Mpeg-4 HD *H.264*

User's Manual
Digital Combo Receiver

KTSC-S660HD

General Safety

Warning

Always follow these instructions to avoid the risk of injury to yourself or damage to your equipment.

Unplug the receiver from the AC power outlet before cleaning. Use only a damp cloth for cleaning the exterior of the receiver.

Do not use accessories or attachments not recommended by the receiver manufacturer as they may cause problems to the equipment and will void the warranty.

Do not place the receiver on an unstable cart, stand, tripod, bracket, or table. The receiver may fall, causing serious personal injury and damage to the receiver.

Do not block or cover the slot opening in the receiver. These are provided for ventilation and protection from overheating. Never place the receiver near or over a radiator or any heat source. Do not place the receiver in an enclosure such as a cabinet without proper ventilation
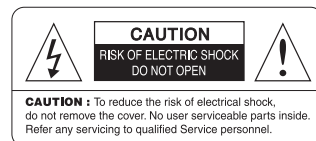
Do not stack the receiver on top of or below other electronic devices.

The apparatus shall not be exposed to dripping or splashing and with no object filled with liquids, such as vases, shall be placed on the apparatus.

Operate the receiver using only the type of power source indicated on the marking label. Unplug the receiver power cord by gripping the power plug, not the cord.

Route power supply cord so that are not likely to be walked on or pinched by items placed upon or against them. Pay particular attention to the cords that plugs in the convenience receptacles, and the point where they exit from the unit. Use an outlet that contains surge suppression or ground fault protection. For added protection during a lightning storm, or when the receiver is left unattached and unused for long periods of time, unplug it from the wall outlet and disconnect the lines between the receiver and the antenna. This will provide some protection against electrical damage caused by lightning or power line surges.

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION : To reduce the risk of electrical shock, do not remove the cover. No user serviceable parts inside. Refer any servicing to qualified Service personnel.

Servicing

Do not attempt to service the receiver yourself, as opening or removing covers may expose you to dangerous voltage, and will void warranty.
Refer all servicing to authorized service personnel.

General Safety

**Digital Combo Receiver
Owner's Manual**

OPERATION HANDBOOK

Before operation,
Please read the entire manual thoroughly
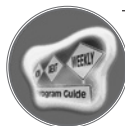and retain it for future reference.

Channel Search

Channel List

Edit Channel List

Program Guide

System Setting
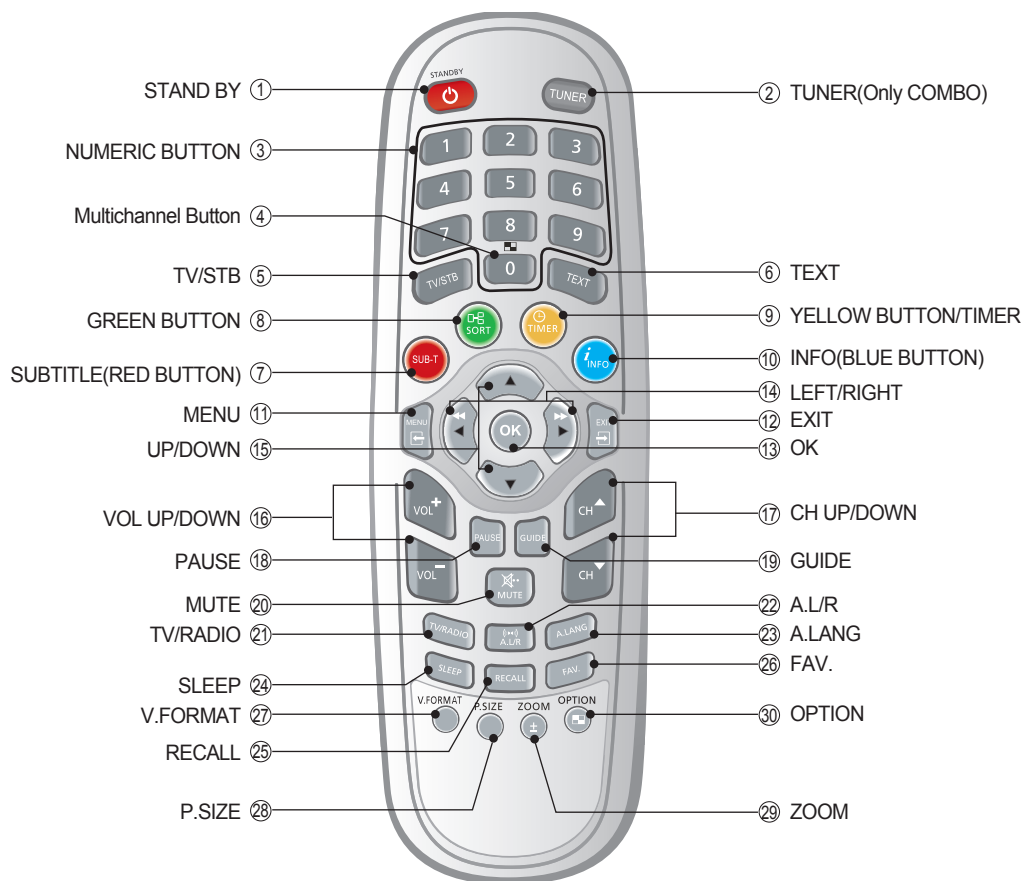
Common Interface (Option)

Utility (Option)

Contents

Contents

Remote Control Unit

STAND BY ① ── STANDBY

② ── TUNER(Only COMBO)

NUMERIC BUTTON ③

Multichannel Button ④

TV/STB ⑤

⑥ TEXT

GREEN BUTTON ⑧

⑨ YELLOW BUTTON/TIMER

SUBTITLE(RED BUTTON) ⑦

⑩ INFO(BLUE BUTTON)

⑭ LEFT/RIGHT

MENU ⑪

⑫ EXIT

UP/DOWN ⑮

⑬ OK

VOL UP/DOWN ⑯

⑰ CH UP/DOWN

PAUSE ⑱

⑲ GUIDE

MUTE ⑳

㉒ A.L/R

TV/RADIO ㉑

㉓ A.LANG

SLEEP ㉔

㉖ FAV.

V.FORMAT ㉗

㉚ OPTION
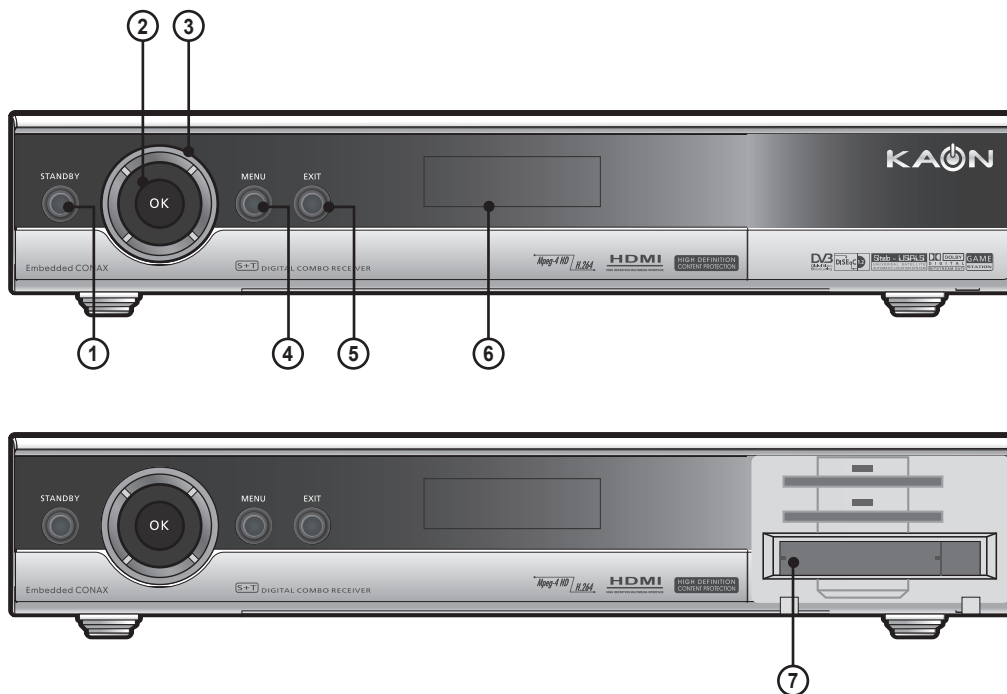
RECALL ㉕

P.SIZE ㉘

㉙ ZOOM

Note 1 When inserting batteries, make sure that the polarity (+/-) is correct.

2 The design of the Remote Control Unit may be changed without any notice in advance.

Remote Control Unit

①	**STAND BY**	To switch between operation and stand by mode.
②	**TUNER**	To switch between Terrestrial and Satellite mode. (Only COMBO)
③	**NUMERIC BUTTONS**	To select the channel and enter the channel edit and PIN code.
④	**MULTICHANNEL BUTTON**	Multi video pop-up window will appear.
⑤	**TV/STB**	To switch between TV and STB receive mode.
⑥	**TEXT**	To see the teletext by OSD. (Option)
⑦	**SUBTITLE(RED)**	To enable or disable subtitle or change the channel list mode.
⑧	**GREEN**	To see the current information banner guide or the satellite list.
⑨	**YELLOW**	To sort channel list.
⑩	**INFO(BLUE)**	To display the information box on the screen.
⑪	**MENU**	To display the Main Menu on the screen or return to the previous menu.
⑫	**EXIT**	To return the normal viewing mode from a menu.
⑬	**OK**	To confirm your choice.
⑭	**LEFT/RIGHT**	To move left or right on the menu. To increase or decrease the volume.
⑮	**UP/DOWN**	To move up or down on the menu.
⑯	**VOLUME UP/DOWN**	To increase or decrease the volume.
⑰	**CHANNEL UP/DOWN**	To change channel up and down.
⑱	**PAUSE**	To pause or play video.
⑲	**GUIDE**	To display the TV/RADIO program guide.
⑳	**MUTE**	To enable or disable audio.
㉑	**TV/RADIO**	To switch between TV and Radio.
㉒	**A.L/R**	To select the sound mode.(Mono, Left, Right, Stereo) To display the reserved list. (Option)
㉓	**A/LANG**	To select the audio language.
㉔	**SLEEP**	To select a present time interval for automatic shut off.
㉕	**RECALL**	To return to the previous channel.
㉖	**FAV.**	This button to see the favorite channels selected by the viewer.
㉗	**V.FORMAT**	To change resolution of HD picture. (1080i, 720p, 576p), default HD resolution is 1080i. To change output of HD picture. (Y/Pb/Pr, RGB), default HD output is Y/Pb/Pr. Press V.FORMAT button for only three seconds.
㉘	**P.SIZE**	To change screen size.
㉙	**ZOOM**	Enlarge the current picture.
㉚	**OPTION**	Option function in future.

Front Panel

Note! : The design of the Front Panel may be changed without any notice in advance.

1. POWER(STAND BY)		Switch the receiver power "**ON**" or "**OFF**".
2. OK		Select a program, a highlighted line or parameter value.
3. CH ▲ or ▼ (Program CH ▲ or ▼)		Channel ▲/▼ or select item of sub-menu.
VOL ◄ or ► (Program ◄ or ►)		Volume ◄/► or select item of sub-menu.
4. MENU		To see main menu.
5. EXIT		Exit from parameter and cancel selected function.
6. VFD		To display the current state, such as channel, time and display.
7. CAM Slots (Depending on model)		2 Slots for Common Interface CAM (VIACCESS, IRDETO, NAGRAVISION, CRYPTOWORKS, CONAX) with SmartCard.

Front Panel

● VFD Information
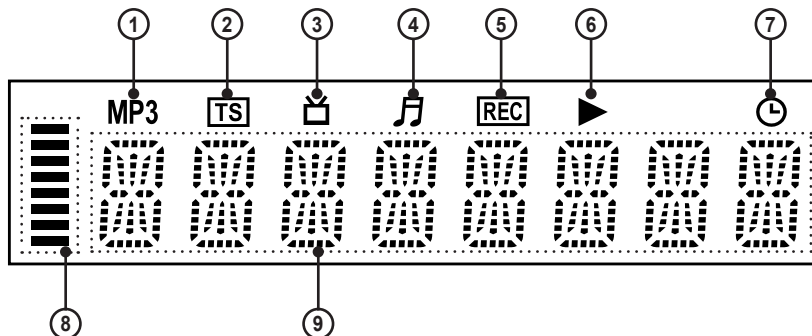
1. Indicates MP3 mode.
2. Indicates Terrestrial or Satellite mode.
   (TS lights when the terrestrial channel is on / TS lights off with the satellite channels)
3. Indicates when the tv channel is on.
4. Indicates when the radio channel is on.
5. The receiver is recording.
6. Indicates playback mode.
7. Indicates when the recorder is in timer recording or a timer recording is programmed.
8. Indicate signal quality level of satellite or terrestrial signal.
9. Indicates clock, elapsed time, playing time, title/chapter/track number, channel name etc.

CAM(Conditional Access Module) and Smart Card(CI and CAS embeded model only)
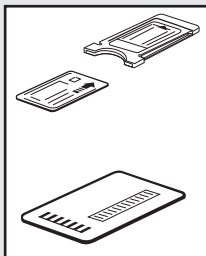
Caution
Please do not plug in the main power supply cord until you have finished all of the connections!

If you want to enjoy watching scrambled broadcasting channels, you need to purchase the CAMs and smart cards from a service provider's sales department. However, broadcasting channels from multiple service providers call for multiple CAMs and Smart cards.
Receivers which have only the CAMs and smartcards provided by the one service provider can show several broadcasting channels of the provider. Please refer to manuals provided by service providers for details because the CAM and smartcards are featured with unique menus, apart from menus given by the receiver. Watching "**Free-To-Air**" channel is available regardless of the CAM and smart cards. As service providers download new information to smart cards if necessary, those who have CAMs and smart cards should always put the smart cards in proper slots.

Rear Panel
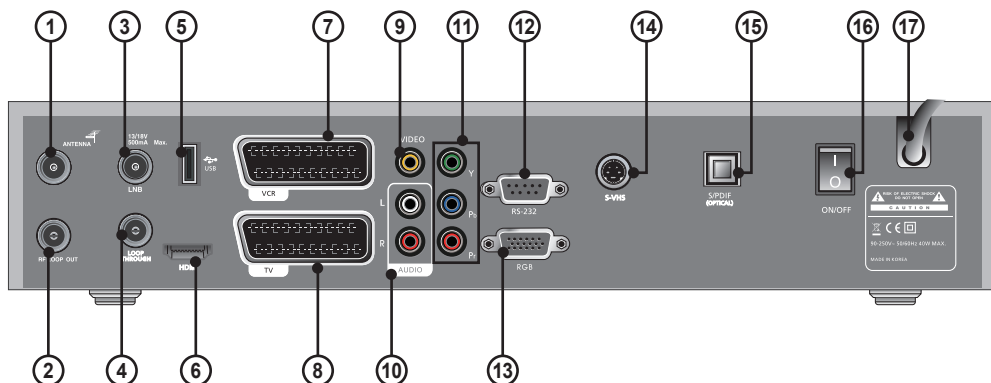
Note! :   The design of the Rear Panel may be changed without any notice in advance.

TERRESTRIAL	
1. ANTENNA	To connect to a digital terrestrial antenna input.
2. RF LOOP OUT	Used to connect a RF signal from the Receiver to either the RF input jack on your television or to the Receiver (RF Loop In).

SATELLETE	
3. LNB	To connect to a satellite antenna and cable jacks.
4. LOOP THROUGH	To connect other satellite receiver.

5. USB	Connect to USB Mass storage device for S/W upgrade.
6. HDMI/DVI	Use the HDMI cable to connect this jack to the HDMI jack on your television for the best quality picture.
7. SCART FOR VCR	Connect this port to the VCR via SCART cable.
8. SCART FOR TV	Connect this port to the TV via SCART cable.
9. VIDEO	Video connection port to the TV or other equipment.
10. AUDIO	Audio connection port to the TV or other equipment.
11. COMPONENT	If you select Y/P$_b$/P$_r$, you can connect your receiver to a TV or VCR that accepts high-quality video input.
12. RS-232	To connect to a personal computer for software upgrade.
13. RGB	If you select RGB, you can connect to RGB cable.
14. S-VIDEO	Connect your receiver to a TV or VCR that accepts S-Video input.
15. S/PDIF(Optical)	Output for connection to a digital amplifier.
16. POWER SWITCH	To provide power to the main unit.
17. POWER SUPPLY	90-250V~ 50/60Hz.

Connecting Your Equipment

How to connect your STB to various systems

There are several ways of connecting the STB to your TV, VCR and/or Hi-Fi SYSTEM. Consult your local supplier for assistance in setting-up your system that is best suited to your requirements.

1. Connect STB to a TV set - Scart, S-Video, A/V

Connect your STB to a TV set with SCART, if your TV set is equipped for it.
Alternatively you can use A/V, TV out (UHF) or S-Video jacks.
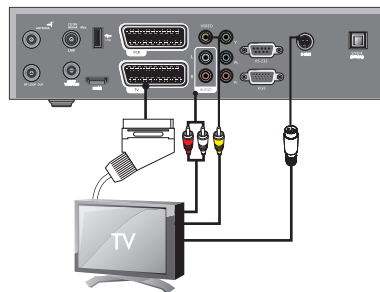
2. Connect STB to a TV set - Component

Component video separates the video into Y (Yellow), P_b (Blue), and P_r (Red) for enhanced video quality.
Be sure to match the component video and audio connections.
Each external input source device has a different back panel configuration.
When connecting an external device, match the color of the connection terminal to the cable.
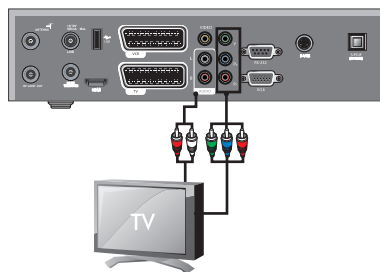
3. Connect STB to a TV set - HDMI

HDMI, or high-definition multimedia interface, is a next-generation interface that enables the transmission of digital audio and video signals using a single cable without compression.
"Multimedia interface" is a more accurate name for it especially because it allows multiple channels of digital audio (5.1 channels). When connecting via HDMI, you do not need to connect Audio Cables. You only need to connect Audio cables when connecting via HDMI/DVI.
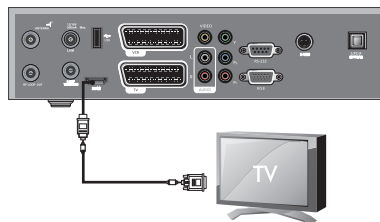
Note! 1 :   The design of the Rear Panel may be changed without any notice in advance.

Note! 2 :   Connect the cable with input jack on STB properly shown in the picture.

Connecting Your Equipment

4. Connect STB to a VCR set

Connect your SCART jack from the VCR to the back of the receiver.
Alternatively you can use A/V, TV out (UHF) or S-Video jacks.
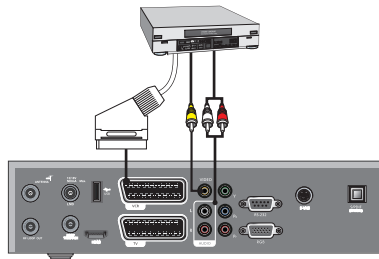
5. Connect STB to a Hi-Fi System

Connect a RCA stereo cable from the AUDIO L/R jacks, S/PDIF on your STB to the LINE, AUX, SPARE or EXTRA input jacks on your Hi-Fi System.
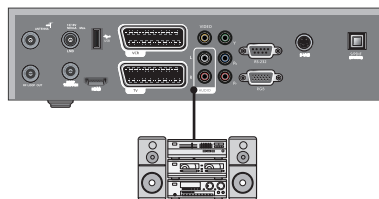
6. Connect STB to a Digital Audio System

If you have a DAC with S/PDIF coaxial cable input, you can connect the STB with it to enjoy
higher quality sound. Connect S/PDIF coaxial cable to a digital amplifier.
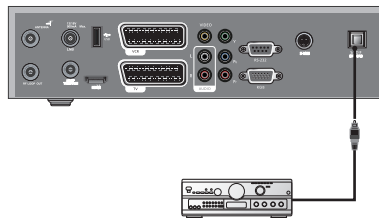
7. Loop Through

If you have another analogue or digital STB and you wish to use the same CATV line then you can connect it via the loop through. Connect one end of the coaxial cable to the Loop Through on the STB and connect the other end to the CATV ANT. IN jackon your second STB.

Note! 1 :   The design of the Rear Panel may be changed without any notice in advance.
Note! 2 :   Connect the cable with input jack on STB properly shown in the picture.

Connecting Your Equipment

TV with Trerrestrial Antenna

1. Connect one end of RCA/Cinch cable to the RCA/
   Cinch jack on the back of the STB and the other
   end to a RCA/Cinch jack on your TV. If your TV
   doesn't have a RCA/Cinch jack, connect one end
   of RF cable to the TV OUT on the back of the
   STB and the other end to a RF input jack on your TV.

2. Connect one end of RF cable to the ANT IN on
   the back of the STB and the other end to a
   terrestrial antenna connection or the jack for
   the public antenna on the wall.

3. Finally connect the coaxial cable from the CATV line to
   the ANT jack on back of the STB.
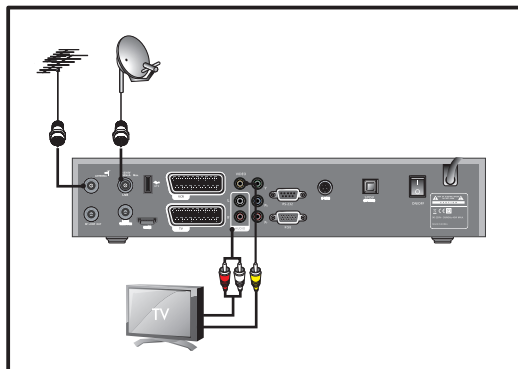
Note! 1 :   *The design of the Rear Panel may be changed without any notice in advance.*

Note! 2 :   *Connect the cable with input jack on STB properly shown in the picture.*

TV with Motorized System (DiSEqC 1.2)

1. Connect one end of RCA/Cinch cable to the
   RCA/Cinch jack on the back of the STB and the
   other end to a RCA/Cinch jack on your TV.
   If your TV doesn't have a RCA/Cinch jack, connect
   one end of RF cable to the TV OUT on the back of
   the STB and the other end to a RF input jack on
   your TV.

2. Connect one end of your coaxial cable tothe LNB IN
   connector on the STB and the other end to the REC
   or Receiver connector on the DiSEqC 1.2 motor.

3. Connect the coaxial cable from the LNB to the LNB
   connector on the DiSEqC 1.2 motor.
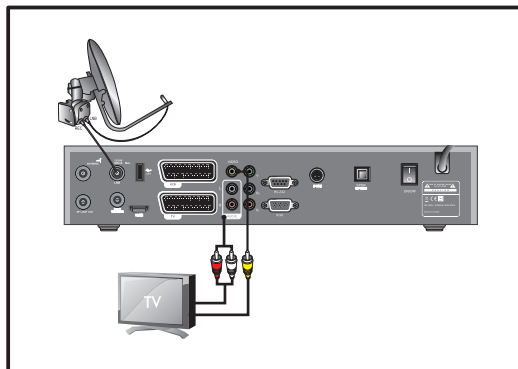
Note! 1 :   *The design of the Rear Panel may be changed without any notice in advance.*

Note! 2 :   *Connect the cable with input jack on STB properly shown in the picture.*

Connecting Your Equipment

Reference

1. DiSEqC 1.0 Connection

All our receivers are designed to be DiSEqC 1.0 and DiSEqC 1.2 compatible.
This allows multiple antennas to be connected to the STB at the same time.
If you have two or more fixed antennas or LNBs then we recommend you use a DiSEqC 1.0 switch.
Connect the coaxial cable from the first LNB to the LNB 1 or LNB A input connector of the DiSEqC switch.
Do the same for any other LNBs that you have.
Connect one end of a coaxial cable to the RF output connector of the DiSEqC switch,
connect the other end to the LNB IN socket on the STB.

2. DiSEqC 1.2/ USALS Connection

To the digital receiver, you can connect either a single satellite antenna directly or LNB of multi-feed
equipment.
When installing the USALS please consult and receive assistance from an installation specialist,
or ensure that the 0-degree angle of the motor is facing due south when installing, for proper
operation.

3. HDMI

High-Definition Multimedia Interface. A new all-digital interface for digital TVs that carries video, audio, data,
and control signals.

4. DVI

Digital Visual Interface. A 100% digital connection from a computer or set-top receiver to a digital TV set.

Basic Operation

Basic Function

1. Program Information

After the television channels have been programmed, you will see the information box each time you change the channels.

1. Every time you change channels you will receive program information for a few seconds. (In the "**Banner Time**" menu you can select how long this information will be shown.)

2. You may change channel lists with the ▲ or ▼ buttons.
   You can get "**Channel Banner**" on the bottom of the screen.

3. When you press the **COLOR** button, you can use banner as a simple channel operation. In this case, you can get a simple EPG on right view.
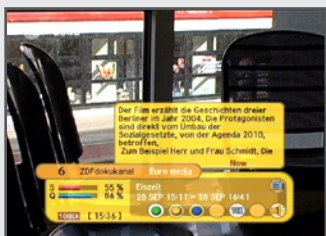
2. Now-Information Banner

1. During "**Channel Banner**" is appearing, when you press **GREEN** button, you can get "**Now-Information Banner**".

2. Using "**Now-Information Banner**", you can get a simple EPG of "**Now-Information**".

3. Next-Information Banner

1. During "**Channel Banner**" is appearing, when you press **YELLOW** button, you can get "**Next-Information Banner**"

2. Using "**Next-Information Banner**", you can get a simple EPG of "**Next-Information**".

Basic Operation

Basic Function

4. Channel-Information Banner

1. During "**Channel Banner**" is appearing, when you press **INFO(BLUE)** button, you can get "Channel-Information Banner".

2. Using "**Channel-Information Banner**", you can get a detailed channel listing information.

5. Volume Control/Mute

1. To control audio volume, press **VOL ▲** or **▼** buttons.

2. Volume control bar will be appeared in bottom of the TV screen

3. After time-out in 1 second, volume control bar will disappear.
   To temporarily stop the volume, press the **MUTE** button.
   To cancel mute, press the **MUTE** button again or press the **VOL ▲** or **▼** buttons.

6. Teletext / Subtitle

1. Press the **RED** button, popup window will be displayed on the screen.

2. Select the off, then subtitle function is off.

3. Select the Subtitle, then you can see the subtitle language.

4. Select the Teletext, then you can see the teletext language.

Basic Operation

Basic Function

7. Timer

The user can reserve a desired program at a desired time by using the **Timer** function.

1. Once, Daily, Weekly Reservation.
   - ♦ Use the ▲, ▼, ◄, or ► buttons in the Timer Setting screen to select the date and time.
   - ♦ Press the **OK** button to save the selected time on the Disk icon. The program will record at each and every selected time.

     Once   : once
     Daily   : daily
     Weekly   : weekly
     Off   : off

2. Reservation from EPG (Option).
   - ♦ Selects the desired program to be reserved from the EPG screen. Pressing the **YELLOW** button will open the Timer Window.

8. Simple Channel List

1. When you press **OK** button during receiving service stream, you can get "**Channel List**" view.

2. Using ▲ or ▼ buttons in "**Channel List**" view, you can choose another channel.

3. After moving highlight on a channel, then press **OK** button.

4. Press **SUB-T(RED)** button to change channel listing.

5. To get the channel sort list, press the **YELLOW** button. Pop up window will be displayed on the screen. When you press **YELLOW** button, the sort and CAS sort are toggled.

6. Select the sort list you want with ▲ or ▼ buttons and then press **OK** button to get it.

Basic Operation

Basic Function

9. Soundtrack

1. When you want to change the Audio Language of current channel, press the **A.LANG** button on the remote control.
   The on-screen menu is displayed on the left side of the screen.

2. Use ▲ or ▼ buttons to choose the audio you want.

3. To cancel or exit, press the **A.LANG** button again.

You can change a default audio language in the system setting menu mode.

10. To change the audio output

1. Press the **A.L/R** button on the remote control unit to change the output.

2. Then on-screen menu is displayed on the top right side of the screen.

3. Press the **A.L/R** button repeatedly to change the sound mode.
   (Mono, Left, Right, Stereo)

Menu Guide

Easy Installation

Before you can view the television or radio program, you must perform the installation procedure first.
Therefore you will see only "Easy Installation Menu" at first when you plug in your system.
The Easy Installation gives you the convenience of selecting various languages, adjusting the time and channel search.

1. Automatic Installation by "Easy Installation"

The Installation Wizard is user friendly to assure easy set-up of the receiver by the new user.

2. System Connection

Connect STB to all peripheral devices such as TV, Audio, Video etc..

3. Power On

Turn on the STB power and other devices.

4. Power Off

When you press the **STAND BY** button again.
The STB will display "OFF".

Menu Guide

Easy Installation
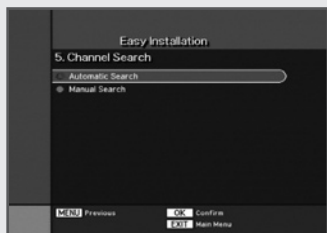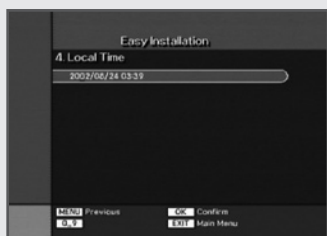
Language

The first option is "**Language Select**" to select the desired language of the
Menu, Audio, or Subtitle.
Place the cursor on the sub menu by pressing the keys and press
the **OK** button to change language.
The Language of Menu, Audio, or Subtitle will be changed to the selected language.

Local Time

You can set your local time according to your location.
To set the local time, press **Numeric** buttons.

Channel Search

You can search the channels according to the DiSEqC mode.
Press the **OK** button. Channel Search screen will appear.

Menu Guide

Main Menu

Press the MENU button on the remote control unit.
You will see the "Main Menu" on the screen.

1. You can move into the desired submenu using ▲ or ▼ buttons.
2. You should enter the PIN code in order to move into the corresponding submenu in case of "**Edit Channel List**" or "**System Setting**".
3. Press **OK** button to confirm your selection.
4. Press the **MENU** button to return to previous menu.
   Or press the **EXIT** button to quit the Menu system completely.

Main Menu shows the following information.

Channel Search	:	Satellite(None/Switch, Motor, USALS), Terrestiral
Channel List	:	Shows Favorite 1~8 all channels, sort, CAS sort. Satellite sort.
Edit Channel List	:	Edits favorite 1 ~ 8, Lock, Skip, Delete, Move, or Genre.
Program Guide	:	Shows Now, Next, Weekly program guide.
System Setting	:	Set Menu Language, Audio Language, Subtitle Language, Screen Type, Banner Time, RF Mode, RF Channel, Local Time, Menu Transparency, Change PIN code, Parental Lock, Receiver Lock, Menu Lock, SPDIF Output, Auto Power, Factory Reset, and System Information.
Common Interface	:	Shows scramebled channels by using common interface modules.
Utility	:	Game, Demonstration, Calendar, Zoom, Calculator.

Channel Search

- Satellite Search

Select channel search in main menu.
At the POP Up window, select DiSEqC MODE.

DiSEqC : None, Switch , MOTOR (DiSEqC 1,2), USALS

1. Satellite   : Select the satellite list you want using ▲ or ▼ buttons on the satellite list.

- Edit, Add, or Delete

♦ Press **YELLOW** button to edit, add, or delete satellite list.
   Pop Up menu will appear.

♦ Select mode using ◄ or ► buttons.

♦ Place the cursor on satellite field and press **OK** button.
   The keypad will be displayed so that you can edit or add satellite name you want.

♦ Input degree you want using **NUMERIC** buttons or ◄ or ► buttons.
   And press **OK** button to save.

♦ To delete satellite list on the list, press **YELLOW** button to select delete mode in pop up menu. And press **OK** button.

2. TP list

♦ When the **GREEN** button is pressed, it can be toggled Satellite list and TP list.

♦ Press **YELLOW** button to edit, add or delete the TP list.
   Pop up menu will appear.

♦ Input Mode, Frequency, Symbol Rate, Polarity, Transmission, Modulation, and FEC, and Pilot. Press **OK** button to save.

Channel Search
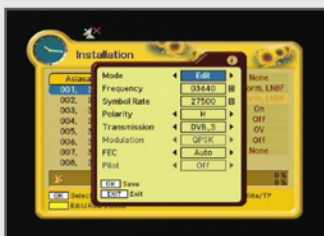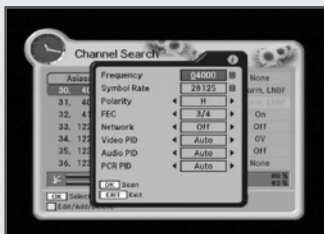
- Scan

Press the **RED** button on the TP list.
Pop up window will be displayed on the screen.

♦ Frequency :   Input a proper Frequency using **NUMERIC** buttons.

♦ Symbol Rate :   Input a proper Symbol Rate using **NUMERIC** buttons.

♦ Polarity :   Use the ◄ or ► buttons to select the Polarisation of the
                 transponder.(Horizontal, Vertical)

♦ FEC :   Use the ◄ or ► buttons to select the FEC of the
           transponder.

♦ Press **YELLOW** button to edit, add or delete the TP list.
  Pop up menu will appear.

♦ Input Mode, Frequency, Symbol Rate, Polarity, Transmission, Modulation,
  and FEC, and Pilot. Press **OK** button to save.

♦ You can select the value of Auto, 1/2, 2/3, 3/4, 5/6, and 7/8.

♦ Network :   You can select Yes or No. When you select "**Yes**",
               you can find more transponders using the home network.

♦ Video PID/Audio PID/PCR PID :

               You can set PID to search for services.
               Use the ◄ or ► buttons or **NUMERIC** buttons to input
               the value.
               Press **OK** button to start Scanning.

Transmission	DVB_S	DVB_S2	
Modulation	Disabled	QPSK	8PSK
FEC	Auto,1/2,2/3,3/4,5/6,7/8	1/2,3/5,2/3,3/4, 4/5,5/6,8/9,9/10	3/5,2/3,3/4, 5/6,8/9,9/10
Pilot	Disabled	Auto,Off,On	Auto,Off,On

Menu Guide

Channel Search
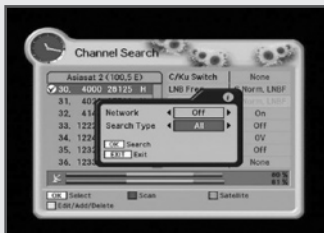
3. C/KU Switch : You can select C/KU band by selection of switch type.

4. Position (MOTOR (DiSEqC 1,2))
: After selecting a satellite, please select position number.
To change value, press **OK** button.
The position list will be displayed.

5. Degree (USALS) : Press the **NUMERIC** buttons and enter te degree.

6. LNB Freq. : Select the proper LNB frequency referring to your LNB using **OK** and ▲ or ▼ buttons.

7. C-LNB Freq. : When selecting the C/KU Switch is selected as "**None**", the C-LNB Freq will be dimmed automatically. Press **OK** button, and then the C-LNB Freq. list will be displayed. You can also input the freq. you want. After inputting freq. using **NUMERIC** buttons, press **OK** button.

8. LNB Power : Select the LNB Power On or OFF.

9. 22KHz : Depending on the user's antenna switch box or LNB. You can supply either 22KHz by setting "**ON**" or not by setting "**OFF**". When selecting the U-LNB 1 and U-LNB 2, the 22KHz will be dimmed. (MOTOR (DiSEqC 1,2))

10. 0V/12V : Depending on the user's antenna switch box. You can choose either 0V/12V.

11. Tone Burst : Depending on the user's antenna switch box. ("**off**", "**SAT A**" or "**SAT B**")

12. Press the **BLUE** button to set Drive(Fine Drive or Normal Drive) to run the motor. (MOTOR (DiSEqC 1,2))

- Fine Drive/Normal Drive : To move the motor, press ◄ or ► button.

- Go to zero : To move the zero position, press **OK** button.

- Store to location : To store the current position, press **OK** button.

- East Limit : To set the east limit by current position, press **OK** button.

- West Limit : To set the west limit by current position, press **OK** button.

- Clear Limit : To clear the stored limit value, press **OK** button.

13. DiSEqC : You can select and use appropriate port for your DiSEqC switch box. Press **OK** button to select DiSEqC List. (None, DiSEqC A, DiSEqC B, DiSEqC C, DiSEqC D)

Menu Guide

Channel Search
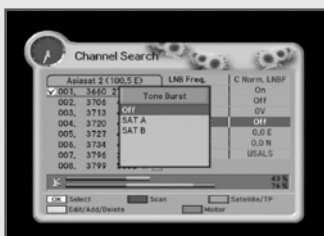
14. Longitude (USALS)   : Press the **NUMERIC** buttons and enter the Longitude. When the **OK** button is pressed. It can be toggled East/West.

15. Latitude (USALS)   : Press the **NUMERIC** button and enter the Latitude. When the **OK** is pressed, it can be toggled North/South.

16. Press the BLUE button to set Drive(Fine Drive or Normal Drive) to run the motor. (USALS)

- Fine Drive/Normal Drive : To move the motor, press ◄ or ► button.
- Go to zero : To move the zero position, press **OK** button.
- East Limit : To set the east limit by current position, press **OK** button.
- West Limit : To set the west limit by current position, press **OK** button.
- Clear Limit : To clear the stored limit value, press **OK** button.

Note: After the Degree, Longitude and Latitude is entered accurately the DiSEqC Motor will automatically move to the satellite's position.

♦ After selecting all that is necessary, press **RED** button to scan the satellite list. Pop up widow will be displayed.
♦ Select ON or OFF according to your Network.
♦ Select All or FTA Search Type.
♦ Press **OK** button and searching will start.
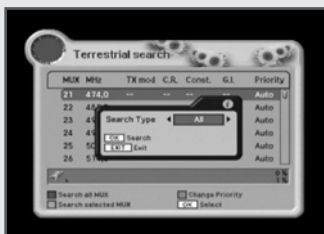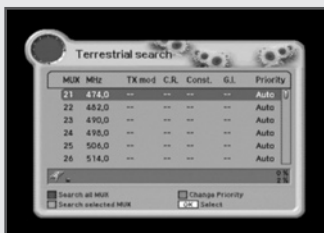
Channel Search

- Terrestrial Search

In this menu, You can set terrestrial channel automatically.

- Automatic Search for all MUX

1. Press the **SUB-T(RED)** button to start searching.

2. At the pop up window, select all channel or FTA channel search.

3. When searching is started, the name of channels searched will be displayed on the screen.

4. When searching is finished, the "**Search finished**" message will be displayed on the center of the screen.

5. Press the **OK** button to save the channel list and watch the channel searched.

Menu Guide

Channel Search
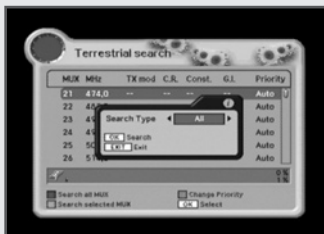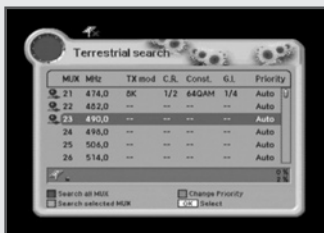
- Manual Search

Manual search is more convenient to search a specific MUX.
This menu searches also all channels broadcasted over a specific MUX using its detected information.

1. Press the ▲ or ▼ buttons to select the MUX No. you want to find, and then press **OK** button to add or remove from the search list.

2. To start search, press the **GREEN** button.

3. At the pop up window, select all channel or FTA channel search.

4. When searching is started, the name of channels searched will be displayed on the screen.

5. When searching is finished, the "**Search finished**" message will be displayed on the center of the screen.

6. Press the **OK** button to save the channel list and watch the channel searched.

♦ Press the **BLUE** button to change the MUX priority. (Auto/High/Low).
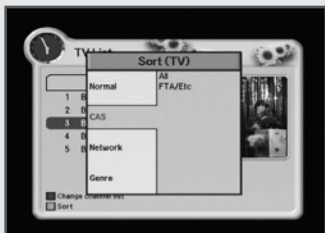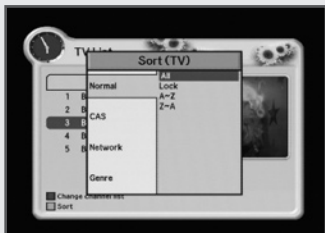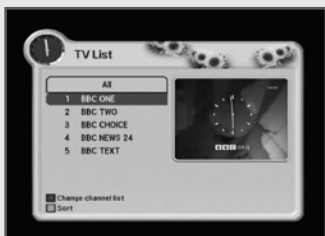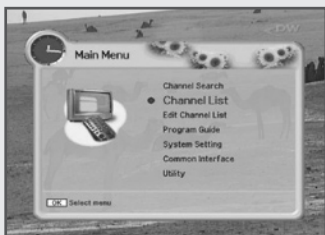
Channel List

This menu helps you to easily select the channel that you want to watch.
You can see the channel list when you had searched before. To use this menu,
you should set channel group you want in the Edit Channel List menu.

1. Select **"Channel List"** in the main menu with ▲ or ▼ and press **OK** button.

2. Using ▲ or ▼ buttons, you can choose your channel with
   small-sized video view on right side.

   Note   To get the full-sized video view, press EXIT button.

3. To see the available channel list, use the **SUB-T(RED)** button on the remote
   control unit repeatedly.

   The channel list moves in the following sequence :
   ALL → Favorite from 1 to 8 → Lock

4. Press the **TV/RADIO** button to toggle between TV channel list
   and Radio channel list.

5. To get the channel sort list, press the **GREEN** button.
   Pop up window will be displayed on the screen.
   When you press **GREEN** button, the sort and CAS sort are toggled.

6. Select the sort list you want with ▲ or ▼ buttons and then
   press **OK** button to get it.

   Normal :   **ALL, Lock, A~Z, Z~A.**

   CAS Sort :   **ALL, FTA/Etc.**

   Network :   **ALL, network which you have searched.**

   Genre :   **ALL, Movie, News and Factual, Entertainment, Sport, Factual, Education,**
   Lifestyle, Drama, Music, Arts, Current Affairs, Special, Comedy,
   Documentary.

7. To get the satellite sort list, press the **GREEN** button.
    You can get it.

    Satellite : All, the satellite which you have searched.

Edit Channel List

From these menus,
You can edit favorite lists, lock, skip, delete, or move channel.

1. Select "**Edit Channel List**" in the main menu with ▲ or ▼ buttons
   and press **OK** button.

2. At the request window, Input **PIN** code.
   If you have not entered your own PIN code, then the PIN code 0000 applies, which
   was set at the factory.

3. Press the **SUB-T(RED)** button. The edit list will be displayed on the screen.
   Select the sub menu you want in the list and press **OK** button.
   The selected sub menu will be displayed at the right folder.

4. Among the all channel list, the selected channel can be moved to the right
   folder of favorite 1~8, Lock, Delete, Skip, Move, or Genre.
   Press **OK** button to add from edit list at right folder.

5. To remove the channel list from edit list at right folder, press **OK** button.
   The edited list will be removed.

6. To rename the channel, press **YELLOW** button.

7 To confirm the channel list, press the **MENU** button or **EXIT** button.
   The request window will be displayed on the screen,
   Press **OK** button to save or **EXIT** button to exit this menu.

Menu Guide

Edit Channel List

1. Favorite 1 ~ 8 (option)

1. You can edit favorite TV and Radio list.
   This enables you to create the 8 favorite TV and Radio lists.

2. Select the channel you want to edit favorite list and press **OK** button.

Note   To rename the Favorite channel, press INFO(BLUE) button.

2. Lock

1. From here you can lock channels in any of the list in order to prevent
   (e.g. your children from watching.)

2. Select the channel you want to lock and press **OK** button.

3. Repeat the procedure for each channel you want to lock.
   When you lock a channel in any list, the channel will be locked automatically in all
   other lists.

3. Delete

1. You can delete TV or Radio channel from the current list.

2. Select the channel you want to delete and press **OK** button.

4. Skip

1. You can skip TV or Radio channel from the current list.

2. Select the channel you want to skip and press **OK** button.
   Skipped channel will be by passed while scrolling on the TV or RADIO
   channel list.

3. To recover the skipped channel, press the **OK** button from edit list.

Menu Guide

Edit Channel List

5. Move

1. You can change the position of the channel you want on the TV/Radio/ All channel lists.

2. Select the channel you want to move to desired channel and press the **OK** button.

3. And press the **INFO(BLUE)** button to change the position of the channel you want.

4. Using ▲ or ▼ buttons, select the channel you want to move and press **OK** button.

5. The position of the channel will be moved.

6. Genre

1. You can edit TV and Radio list of the genre which is various.(Movie, News and Factual, Entertainment, Sport, Children's, Factual, Education, Lifestyle, Drama, Music, Arts, Current Affairs, Special, Comedy, Documentary.)

2. Select the channel you want to edit genre list and press **OK** button.

Program Guide
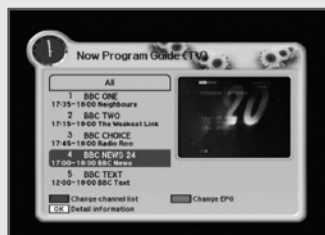
The program guide supplies information such as program listings and ending times for all available programs.

1. Select "**Program Guide**" in the main menu with ▲ or ▼ buttons and press **OK** button. In the viewing program, when you press the EPG button, you can get this view.

Note   The Program Guide information may not be supplied by service providers.

Menu Guide

Program Guide

1. Now/Next Program Guide

Shows the information of Present/Following program on different channels.
To watch the programs you go through the display window :

1. Select a program with ▲ or ▼ buttons, you can get the list at right-side view.

2. Use the **SUB-T(RED)** button to change the channel list.

3. After selecting the program you want, press **OK** button.
   You can see the detailed information.

4. If you want to change program guide, press **INFO(BLUE)** button.

2. Weekly Program Guide

Shows the information of program that will be played for a week.

1. When you press **INFO(BLUE)** button, you can alternatively select Now,
   Next or Weekly EPG.

2. To see more information about the program you want on the weekly EPG,
   move the highlighted channel by pressing ▲, ▼, ◄, or ► buttons and then
   press **OK** button.

3. EPG Information

1. To view the Program Guide, press the **EPG** button on the remote control unit.
   The EPG information will be displayed on the bottom of the screen.

2. Each press of ▲ or ▼ buttons will change the displayed EPG information by
   one hour.

3. Each press of ◄ or ► buttons will change the displayed EPG information by
   one day.

4. If there is available EPG information, it will be displayed on the EPG
   information bar.

5. Press the **EPG** button again, and the Program Guide menu will be displayed.

Menu Guide

System Setting

You will be asked to enter your PIN code before you can enter this menu. The PIN code preset to 0000 from the factory.
The code can be changed from the "<u>Change PIN Code</u>" menu. Refer to page 36.

If you want to customize the system to suit you better, you can specify some settings from the submenus in the "<u>System Setting</u>" menu.

1. Select "**System Setting**" in the main menu with ▲ or ▼ buttons and press **OK** button.

2. Select sub menu you want in System Setting with ▲ or ▼ buttons. The sub menu will be shown at the right side of the screen.

3. Using ► button to move the cursor on sub menu or return to "**Setup List**" using ◄ button.

1. Menu Language

Here you may select in which language the menus will be shown.

1. Use the ▲ or ▼ buttons to move to the language you want and then press **OK** button.
   You can choose the language from a selection of **English**, **Español**, **Suomi**, **Norsk**, **Svenska**, **Deutsch**, **Français**, and etc..
   The selected menu language will be applied on whole menu.

2. Audio Language

In this menu You can change default language for audio when changing services.

1. Use the ▲ or ▼ buttons to move to language you want and then press **OK** button.
   You can choose the language from a selection of **English**, **Spanish**, **Finnish**, **Norwegian**, **Swedish**, **German**, **French**, and etc..

Menu Guide

System Setting
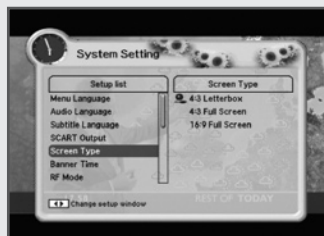
3. Subtitle Language

In this menu You can change default language for subtitle when changing services.

1. Use the ▲ or ▼ buttons to move to language you want and then press **OK** button.
   You can choose the language from a selection of **English**, **Spanish**, **Finnish**, **Norwegian**, **Swedish**, **German**, **French**, and etc..

Note   If you cancel the subtitle function, select the off. (Option)

4. Screen Type

If you have a TV set with the 4:3 picture format and the transmission is in 16:9, you can select 4:3 letterbox, 4:3 full screen and 16:9 full screen.

1. Select the aspect ratio of **TV** which is connected to **STB** and then press **OK** button.

Note 1   Fullscreen will fill up the screen but cut off some information on the left and right sides.

*   2   Letterbox will give a complete picture, but leave black areas at the top and bottom.*

*   3   For easy selection of Screen Type, press the P.SIZE button on your remote control.*

Menu Guide

System Setting
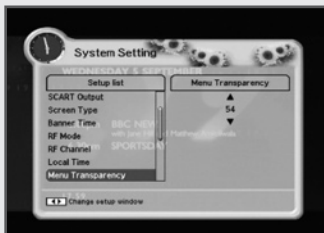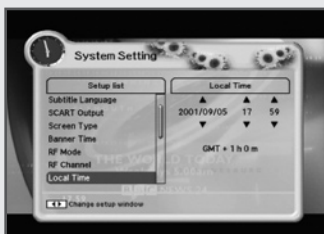
5. Banner Time

When you switch channels, an information banner will be shown for a few seconds.
You can select for how long the banner will be shown.

1. Select the banner time you want and then press **OK** button.

2. Each selectable time items has meaning of the interval time during a channel banner stays on changed channel screens.
   The time ranges 1, 3, 6, 9 12, and 15 seconds.

6. Local Time

You can set your local time according to your location.

1. To set year, month and date, press ▲ or ▼ buttons.
   The Calendar pop up window will be displayed.
   Select year using **SUB-T(RED)** and **GREEN** button.
   Select month using **YELLOW** and **INFO(BLUE)** button.
   Select date using ▲, ▼, ◄, or ► buttons.

2. Adjust hour and minute with ▲ or ▼ buttons and move the field with ◄ or ► buttons.

3. When the **OK** button is pressed, the selected time applies.

7. Menu Transparency

From 20 to 100 will give the variable transparency on Video and OSD screen.

Select an menu blending ratio and press **OK** button.
The transparency will be applied on the screen.

System Setting

8. Change PIN Code

From here you can change the PIN code from the standard 0000. <u>DO NOT FORGET IT!</u> Without it, you are not able to access to any of the functions where the code is required.

You can change password for Parental Lock and Receiver Lock simultaneously.

1. Input the current PIN code using **NUMERIC** button on the remote control.

2. In the highlighted new PIN code, input a new PIN code.

3. To verify the new PIN code, re-enter a new PIN code in the highlighted confirm PIN code.
   If the **PIN Code** is correct, the message **"Success"** will be displayed on the display window.

Note   If you forget the PIN code, press the RGYB(Color) button in sequence.
(i.e. Red → Green → Yellow → Blue button)
The PIN code will be changed to "0000"
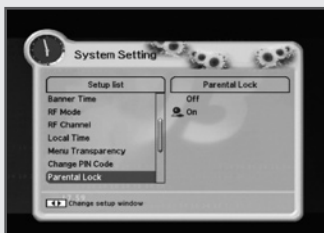
9. Parental Lock

When you change "Parental Lock" to "On" or "Off", service channel can get or not from that set values. If you select "On", you may need PIN code every time you select the lock channel program as you set in the channel control. If you select "Off", you can see all channels without PIN code.
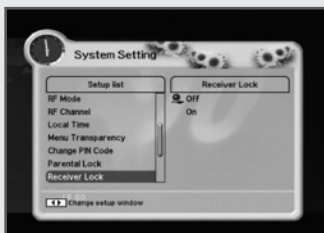
10. Receiver Lock

If you select "On", you will have to enter the PIN code every time you start the receiver from standby.

Menu Guide

System Setting

11. Menu Lock

If you select "On", you will have to enter the PIN code every time when you enter the Channel Search Menu and Channel List Menu.
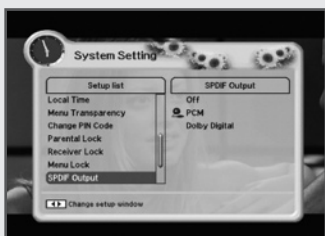
12. S/PDIF Output

You can hear digital audio of the Dolby 5.1 channel using S/PDIF Output.

1. If selecting OFF, the digital audio will not be output.

2. When selecting PCM, the unzipped digital audio is output through S/PDIF.

3. When selecting Dolby Digital, if the current channel is dolby audio channel, the zipped dolby stream is output through S/PDIF.

13. Auto Power

1. If the Auto Power is set to On and power is off, the Set turns on automatically and turns into the channel mode which you were watching before power breakdown.

2. If the Auto Power is set to Off and power is off, the Set turns into the standby mode.

System Setting

14. S/W Upgrade via USB

15. Factory Reset

Use this option only if you have to start the complete installation procedure from scratch. If you continue from here, all your previous settings and all channels will be cleared ! The default data will be loaded.

If you press **OK** button, it asks for your confirmation.
If you want to reset, press **OK** button, or press **EXIT** button to exit this menu.
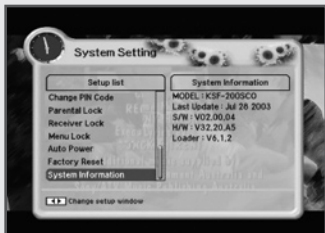
16. System Information

Displays the system information :
MODEL name, Last Update, S/W, H/W, Loader version, C.A.

Menu Guide

Common Interface

The menus are provided by the CA module and its smart card.

Your receiver is equipped with two slots of Common Interface(CI), accepting both Type 1 and Type 2 PCMCIA modules(see diagram below.). Plug in the appropriate CI module together with a valid smart card. You will then have access to the respective scrambled and Pay-Per-View services.

Insert the smart card into the CI module, and the CI module into the slot behind the flap on the front panel.

The CI and smart card modules determine the programs that can be de-scrambled. This receiver supports two CI slots so you can plug in two different modules, automatically provide access to both services.

Each smart card contains your subscription details.
You can view your entitlement via the COMMON INTERFACE menu by using the **MENU** button as below.

1. Press **MENU** button and select Common Interface then Slot1 and Slot2 will be showed up on the screen and the menu will be appeared.
   If you use Slot1 for Irdeto, you will see "**Irdeto**" on the screen.
   Also if you use Slot2 for Viaccess, you will see "**Viaccess**" on the screen.
   Select the item and then you will see information for card.
   Press **EXIT** button if you wish to exit from this menu.

2. If You inserted the smart card with CAM into the receiver, and switch on the receiver. Then you will see "**CAM Initializing icon**" on the top screen.

3. If you do not insert the smart card, you will see the message "**Insert the valid smart card**".
   If you insert the smart card into the CI module then you can watch your selected channel.

Menu Guide

Utility

1. Demonstration

Select **"Demonstration"** in the Utility menu with ▲ or ▼ buttons and press **OK** button, you can see the Automatic Operation Function.
Press the **EXIT** button to quit the Automatic Operation Function completely.

2. Calendar

1. Select **"Calendar"** in the Utility menu with ▲ or ▼ buttons and press **OK** button, you can see the Calendar.

2. Set Year using the **RED** or **GREEN** button.

3. Set Month using the **YELLOW** or **BLUE** button.

Troubleshooting

Problem	Solution
No display LED on the front panel. No power supply	Power cord plug in correctly.
No Picture	Ensure that the STB is switched on. Check connection and correct. Check channel and video output and correct
Poor picture quality	Check the signal level, if this is low then try adjusting the alignment of your dish.
No Sound	Check the volume level of the TV and STB. Check the mute status of the TV and STB. Check the connection of audio cord.
Remote Control does not operate	Point remote control directly towards the receiver. Check and replace batteries. Check that nothing blocks the front panel.
Service is not running or scrambled.	Check the whether the Common Interface module and smart card is correctly inserted. Check that the smart card is appropriate for the selected service.
You have forgotten your secret PIN code.	Refer to 8. Change PIN code(Page 36) of this owner's manual.
Poor High Definition picture quality connected by Y/Pb/Pr or RGB.	Press V.FORMAT key in remote controller to change HD output connection or change the HD resolution (refer to page 7)

Technical Specifications

Tuner		
Satellite	Demodulation	QPSK & 8PSK
	FEC Code Rate	DVB-S (QPSK) : 1/2, 3/5, 3/4, 4/5, 5/6, 8/9, 9/10
		DVB-S (8PSK) : 2/3, 3/4, 3/5, 5/6, 8/9, 9/10
	Input Connector	F type female (75 Ohm)
	Frequency Range	950 MHz - 2150 MHz
	Symbol Rate	2 - 45 Mbaud
Terrestrial	Guard Interval Modes	COFDM 2K/8K-Carrier
	Channel Bandwidth	1/32, 1/16, 1/8, 1/4
	FEC Modes Rate	1/2, 2/3, 3/4, 5/6, 7/8
	Input Connector	IEC 169-2, Female
	Frequency	UHF : 470 ~ 860 MHz, VHF : 174 ~ 230 MHz
	Channel Bandwidth	8 MHz / 7 MHz

MPEG TS A/V Decoder	
Video Resolution	1920 x 1080i, 1280 x 720p, 720 x 576i
Input Bit Rate	Max. 90 Mbit/s
Transport Stream	MPEG-2 ISO/IEC 13818-1
Audio Decoding	MPEG/Musicam Layer 1 & 2
Audio Mode	Single / Dual Channel

A/V & Data Input/Output	
Video	RCA/Cinch, Video Output(CVBS), S-VIDEO Output, D-SUB(RGB), RCA(Y/P$_b$/P$_r$), Din Jack(S-VHS)
Audio	RCA/Cinch Volume & Mute Control (Resolution: 20 bits DAC, Max 2Vrms)

Technical Specifications

A/V & Data Input/Output	
RS-232C	Digital A/V Output
	Transfer rate 115Kbps, 9 PIN D-Sub Type
Digital A/V Output	HDMI(1.0, 1.1)Digital A/V Output

System Resources	
Flash Memory	8Mbytes
SDRAM	128Mbytes, 256Mbytes (Option)
Main CPU MPEG Chip	ST7100

Power Supply	
Input Voltage	90-260V ~ 50/60Hz
Power Consumption	Max. 40W
Protection	Separate Internal Fuse
Type	SMPS

Physical Specification	
Size(W × H × D)	340 × 60 × 250(mm)
Net Weight	2.5 kg
Operating Temperature	0℃ ~ 50℃
Storage Temperature	-20℃ ~ 60℃

Option Function	
Common Interface	2 Slots of DVB -CI (Optional Detachable)
SW Upload	RS232C, (Optional Via OTA), USB

Menu Map

```
Main Menu
    |
Installtion ──────────── Menu Language
Channel List ─────────── Audio Language
Edit Channel List ───── Subtitle Language
Program Guide ────────── Screen Type
System Setting ───────── Banner Time
                         Local Time
                         Menu Transparency
                         Change PIN Code
                         Parental Lock
                         Receiver Lock
                         Menu Lock
                         SPDIF Output
                         Auto Power
                         S/W Upgrade via USB
                         Factory Reset
Common Interface ─────── System Information
Utility
```

Memo

Memo

K1.5_ENGLISH

103676